

STUDIES IN AUSTRALIAN ARANEIDÆ.

No. 4.

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(Plate iii. and text fig. 1).

Family DICTYNIDÆ.

Genus AMAUROBIUS, *C. Koch.*

AMAUROBIUS SOCIALIS,<sup>1</sup> *sp. nov.*

♀ Cephalothorax, 5·5 mm. long, 3·5 mm. broad; abdomen, 6·1 mm. long, 4·2 mm. broad.

*Cephalothorax*.—Obovate, dark brown, hairy. *Pars cephalica* large, strongly arched. *Pars thoracica* broad, sloping posteriorly, arched, median depression and normal grooves distinct.

*Eyes*.—Eight, disposed in two transverse, nearly parallel rows, and occupying almost the entire space in front: front row almost straight, rear row gently recurved. Of the front row the median pair are very slightly the largest, and are placed closely together, nearly touching one another; each lateral eye is separated from its median neighbour by a space equal to once its own diameter; those comprising the rear row are slightly smaller than their anterior neighbours; the median pair are separated from each other by a space equal to about twice their individual diameter, and from their lateral neighbours by about two and a half diameters.

*Legs*.—Robust, yellow-brown, clothed with long hairs, and armed with strong spines. Measurements (in millimetres):—

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<sup>1</sup> *Socialis*—Social, sociable.

Leg.	Coxa.	Trochanter and Femur.	Patella and Tibia.	Metatarsus and Tarsus.	Total.
1	1·1	4·4	4·4	3·8	13·7
2	1·1	4·4	4·4	3·8	13·7
3	1·0	3·6	3·6	3·4	11·6
4	1·0	4·2	4·3	3·8	13·3

*Palpi*.—Concolorous, short, similar in clothing and armature to legs. Measurements: Coxa, 0·4 mm.; trochanter and femur, 1·8 mm.; patella and tibia, 1·8 mm.; tarsus, 1·3 mm.; total, 5·3 mm.

*Falces*.—Dark brown, long, robust, arched, hairy, margins of the furrow of each falx armed with three teeth.

*Maxille*.—Longer than broad, robust, arched, inclining inwards, hairy, the surface dark brown, apices and inner angles pale yellowish.

*Labium*.—Concolorous, longer than broad, hairy, apex truncated.

*Sternum*.—Concolorous also, shield-shaped, convex, hairy.

*Abdomen*.—Ovate, moderately overhanging base of cephalothorax, hairy, yellow-brown, with faintly-visible broad transverse bars, the first three of which are straight, or nearly so, whilst the lower pair are each formed like a short, broad, inverted V; below these, again, there is a large concolorous elongate-oval patch. Laterally and beneath, the surface is hairy, and yellow-brown.



Fig. 1.

*Epigyne*.—As in figure (fig. 1).

*Cribellum*.—Transverse, nearly parallel, and divided into two plates.

*Obs*.—In gravid females, the abdomen appears much lighter in colour.

*Hab*.—Grand Arch, Jenolan Caves.

Some time ago, Mr. J. C. Wiburd presented to the Trustees two large shawl-like webs, taken from the roof of the Grand Arch, Jenolan Caves. Each web was closely and densely-woven, and had been fabricated by a large number of individuals living

together as a community. No spiders were forwarded with the first example, but from its folds I picked a quantity of *arava*, which convinced me that the architects belonged to the genus *Amaurobius*, C. Koch. I thereupon wrote Mr. Wiburd—who has on different occasions presented the Trustees valuable Arachnological collections from the Cave districts—asking him to try and secure some of the spiders responsible for the construction. This he succeeded in doing, so that I am now enabled to describe both the spider and the web.

The larger web presented by Mr. Wiburd measures twelve feet in length, and rather more than four feet at its greatest width, and when hanging *in situ* was festooned amongst the stalactites depending from the roof of the cave. The webs are full of holes, each of which had evidently been the entrance to a retreat tube. These webs are closely and densely woven, and are suggestive of a fabric—such as a shawl. Scattered over the surface of this huge web are a large number of empty cocoons, or ova-sacs. These are pure white, flat, more or less discoidal and closely woven. Each sac consists of two strong, paper-like discs—an upper and a lower—between which the eggs had been placed. None exhibited any trace of loose, flocculent silk. The discs do not appear to vary in size. A number were measured, and from seven to eight millimetres in diameter was the result obtained.

#### Family ECOBIIDÆ.

In my last paper of this series, I recorded for the first time in Australia the occurrence of the family *Mimetidæ*.<sup>2</sup> The present paper records, also for the first time here, the family *Ecobiidæ*. The family is a very small one, consisting of only one genus, and fifteen species. The genus *Ecobius*, Lucas, is distributed over “Regio mediterranea; ins. Atlantica; Arabia merid.; Japonia; Nova Caledonia; America septent. et merid.; Antilla,”<sup>3</sup> to which I now add—Sydney, N. S. Wales.

The species occurring here appears to be, unquestionably, the widely distributed *E. narius*, Bl. This form has been previously recorded from the islands of the Atlantic, Japan, New Caledonia, Venezuela, southern parts of the United States, and the Antilles. This distribution Simon suggests is, without doubt, due to the agency of commerce.

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<sup>2</sup> Rainbow—Rec. Austr. Mus., v., 1904, p. 329.

<sup>3</sup> Simon—Hist. Nat. des Araignées, 2nd Ed., i., 1892, p. 247.

The species are all microscopic. Their webs, which are also small, are closely woven and transparent, and are usually constructed under stones, and in the angles of walls. When at rest in the web, these spiders hang motionless, but when disturbed they are decidedly active, and in endeavouring to escape describe circles. Their cocoons are flocculent, rather transparent, plano-convex, fixed, and contain each seven or eight non-agglutinated eggs.

There are three specimens in the Australian Museum cabinet and they were collected by myself in the Museum building.